

Notice of Allowability

Application No.

10/688,091

Examiner

Nathan M. Nutter

Applicant(s)

DATTA ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 13 April 2007.
2. ☒ The allowed claim(s) is/are 1-29 and 31-35.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

REASONS FOR ALLOWANCE

The following is an examiner's statement of reasons for allowance: no prior art has been found that either teaches or fairly suggests the production of a hetero phase polymeric composition, comprising: a) a polypropylene component, present as a continuous phase and having a melting point of $T_m \geq 110^\circ \text{C}$; b) a modifier component, present as a dispersed phase and including at least 10 percent by weight of the total modifier component being an ethylene α -olefin polymer having a density $\geq 0.905 \text{ g/cm}^3$ having from 0 to 10% propylene crystallinity, as in the invention of claims 1-13 and 35, or being substantially free of propylene crystallinity, as in claims 14-29, and c) a compatibilizer component, present in a compatibilizing amount, and having a $\Delta H_f < 45 \text{ J/g}$, and having propylene sequences co-crystallizable with the polypropylene component of a), as herein recited.

Nor is there teaching or suggestion provided by prior art to manufacture a two phase polymer composition, comprising: a) an impact copolymer of propylene (ICP), said ICP having one or more of $T_m > 140^\circ \text{C}$, $\Delta H_f > 95 \text{ J/g}$ or an α -olefin content of one of > 2 or < 25 weight percent, a molecular weight in the range of from 10,000 -5,000,000, a melt flow rate in the range of from 15 - 60 dg/min., said ICP present in the range of from 70 - 90 weight percent; b) an ethylene α -olefin copolymer, wherein said α -olefin is one or more of butene-1, hexene-1, or octene-1, having a density $\geq 0.905 \text{ g/cm}^3$, may be a blend of two or more ethylene α -olefin copolymers, and if a blend, the aggregate density is $\geq 0.905 \text{ g/cm}^3$, being present in the range of from 15 - 22 weight percent, having an melt index in the range of from 0.1 - 10 g/10 minutes, and having from 0 to

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10% propylene crystallinity, and c) a compatibilizer component present in said two phase polymer composition in the range of 0.1 - 8 weight percent, that is a polymer of propylene and one or more of ethylene, butene-1, hexene-1, or octene-1, and has a crystallinity defined by one of $T_m < 100^\circ \text{C}$ or a $\Delta H_f < 25 \text{ J/g}$, and has a narrow compositional distribution, such that $> 75 \text{ wt. \%}$ of the compatibilizer may be isolated in a thermal fractionation, in 2 adjacent soluble fractions, where each fraction differs 20% from the average weight present α -olefin of the total compatibilizer, as recited in claim 31 and 34.

Nor is there prior art to teach or fairly suggest the manufacture of a hetero phase polymeric composition, comprising: a) a polypropylene component present as a continuous phase, said polypropylene component having a melting point $T_m \geq 100^\circ \text{C}$; b) a modifier, being a dispersed phase in said hetero phase polymer composition comprising at least 10 % by weight of the total modifier component of an polymer derived from ethylene and an α -olefin having from 4 to 20 carbon atoms with a density of at least 0.88 g/cm^3 and a CDBI of at least 50 %, and having from 0 to 10% propylene crystallinity; and a compatibilizer component, derived to an extent of at least 50 mole % of propylene compatibilizer component and having a $\Delta H_f < 45 \text{ J/g}$ which is co-crystallizable with the polypropylene component, as recited in claims 32 and 33.

The rejection of claims 1-29 and 31-35 over Datta et al (WO 00/01766) under 35 USC 102(b) is not tenable since the constituents are not identically disclosed, nor

sufficiently taught to produce the hetero phase composition as recited herein. See applicants' Response of 14 April 2007, page 12 of 13, first full paragraph.

Since there are no outstanding issues with regard to the clarity or enablement of the claims, these claims are deemed to contain allowable subject matter.

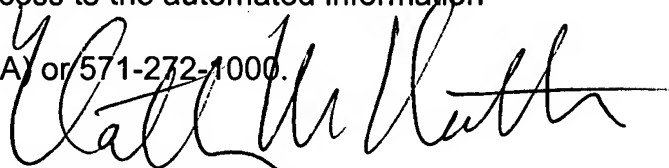
Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan M. Nutter whose telephone number is 571-272-1076. The examiner can normally be reached on 9:30 a.m.-6:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James J. Seidleck can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Nathan M. Nutter
Primary Examiner
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nmn

10 May 2007